

REMARKS/ARGUMENTS

Claims 1-53 remain in the application, all of which stand rejected.

Claims 1, 22 and 39 have been amended to recite that the data samples of the at least one analog signal are captured at a frequency "higher than the switching rate of the at least one analog signal". Support for this amendment is found, at least, on page 5, lines 3-15.

Claims 1, 22 and 39 have also been amended to clarify that "at least some of the digital interface signal information" is displayed in correlated fashion with "a representation of the set of data samples of the at least one analog signal". Support for this amendment is found, at least, on page 8, line 10.

Claims 15, 16, 19, 20, 33, 34, 37, 38, 49, 50, 52 and 53 have been amended to conform to the amendments of claims 1, 22 and 39.

None of the amendments to the claims are believed to introduce new matter.

1. Rejection of Claims 1-13, 16, 17, 22-31, 34, 35, 39-47 and 50

Under 35 USC 103(a)

Claims 1-13, 16, 17, 22-31, 34, 35, 39-47 and 50 stand rejected under 35 USC 103(a) as being unpatentable over Jeong et al. (US 6,229,859 B1; hereinafter "Jeong") in view of Voutilainen (US7,224,737 B2).

With respect to claim 1, the Examiner now admits that Jeong "fails to specifically disclose displaying. . .at least some of the digital interface symbol information with a representation of the at least one analog signal in a correlated fashion." See, 10/17/2007 Office Action, p. 4. However, the Examiner asserts that Voutilainen teaches this limitation. More specifically, the Examiner indicates:

. . . (See fig. 3A-C, 4 & 5 & col. 2, lines 61-64) Voutilainen discloses a system that utilizes PAM signals for clock recovery.

Therefore, taking the combined teachings of Jeong and Voutilainen as a whole. It would have been obvious to one of ordinary skills in the art to have

incorporated this feature into the system of Jeong, in the manner as claimed and as taught by Voutilainen, for the benefit of providing clock recovery.

10/17/2007 Office Action, p. 4.

Applicant respectfully disagrees. The excerpt of Voutilainen cited by the Examiner states:

. . . In one aspect thereof this invention provides a MAS [multi-level analog signaling] method, where each transmitted symbol encodes at least two data bits, that includes encoding data bits into symbols represented by multi-level analog signals;.

Voutilainen, col. 2, lines 61-64.

This excerpt says nothing about displaying "digital interface symbol information" or displaying "a representation of at least one analog signal", let alone displaying digital interface symbol information and a representation of at least one analog signal in a "correlated fashion".

Turning now to Voutilainen's FIGS. 3A-C, applicant asserts that these figures illustrate how a PAM-5 signal is constructed. FIGS. 3A-C do not illustrate a "captured" analog signal. Nor does Voutilainen indicate that any of the signals shown in FIGS. 3A-C are actually displayed to a user (i.e., Voutilainen only shows the waveforms for teaching purposes). Furthermore, although FIGS. 3A-C appear to illustrate analog signals (but not "captured" analog signals), FIGS. 3A-C do not correlate the analog signals with any sort of "digital interface symbol information".

Although the pulse amplitude modulation (PAM) encoding used by Voutilainen, coupled with the idealized form of the signals shown in FIGS. 3A-C (i.e., signals without noise), makes it relatively easy for a user to infer the nature of symbol information contained in the displayed signals, FIGS. 3A-C do not specifically *display* symbol information or *correlate* symbol information with the displayed analog signal. The importance of this can be appreciated to a greater extent by referring to Voutilainen's FIG. 5, which illustrates an actual PAM-5 signal. Note the noise in the signal, as well as the varying pulse widths of the signal, which make it more difficult to discern the nature of symbol information contained therein. The increased difficulty in

discerning the symbol information arises from the fact that the symbol information is not *displayed* in FIG. 5. Nor is any symbol information *correlated* with the displayed analog signal. As, for example, the amount of noise in an analog signal increases (or the frequency of the analog signal increases), symbol information contained in the analog signal becomes even more difficult to discern.

Despite the above differences between applicant's claim 1 and any information that might be displayed by Voutilainen, applicant has amended their "displaying" step to recite "displaying at least some of the digital interface symbol information with a representation of the set of data samples of the at least one analog signal in a correlated fashion". Voutilainen does not recite the display of a representation of data samples of an analog signal.

Claim 1 is believed to be allowable over the combined teachings of Jeong and Voutilainen for at least the above reasons.

Claims 2-13, 16 and 17 are believed to be allowable, at least, because they depend from claim 1.

Claims 22-31, 34, 35, 39-47 and 50 are believed to be allowable, at least, for reasons similar to why claim 1 is believed to be allowable.

2. Rejection of Claims 14, 15, 18-20, 32, 33, 36-38, 48, 49 and 51-53
Under 35 USC 103(a)

Claims 14, 15, 18-20, 32, 33, 36-38, 48, 49 and 51-53 stand rejected under 35 USC 103(a) as being unpatentable over Jeong et al. (US 6,229,859 B1; hereinafter "Jeong") in view of Voutilainen (US 7,224,737 B2) and Sajdak et al. (US 6,570,592 B1; hereinafter "Sajdak").

Applicant believes claims 14, 15, 18-10, 32, 33, 36-38, 48, 49 and 51-53 are allowable, at least, for reasons similar to why claim 1 is believed to be allowable, and because Sajdak fails to disclose that which is missing from Jeong and Voutilainen (see, e.g., Section 1 of these Remarks/Arguments).

3. Conclusion

In light of the amendments and remarks provided herein, applicant respectfully requests the issuance of a Notice of Allowance.

Respectfully submitted,
HOLLAND & HART, LLP

By: 

Gregory W. Osterloth
Reg. No. 36,232
Tel: (303) 295-8205